

DRAFT PROPOSED CLAIM AMENDMENTS

Claims 1-54 (Canceled)

Claim 55. (Currently Amended) A complex ~~having two polypeptide molecules~~ comprising:

a) a ~~first polypeptide molecule~~ particle having five papillomavirus capsid L1 polypeptides or truncated papillomavirus capsid L1 polypeptides, truncated papillomavirus capsid L1 polypeptides comprise papillomavirus capsid L1 polypeptides having: a truncation up to 30 amino acids removed from a carboxy terminus, a truncation up to 9 amino acids removed from an amino terminus ~~and~~ or point mutations at cysteines residues within the papillomavirus capsid L1 polypeptides; and

b) a ~~second polypeptide molecule~~ comprising ~~at least one immunogenic epitope and one or more~~ papillomavirus capsid L1 interaction sequence(s), the papillomavirus capsid L1 interaction sequence comprises ~~at least 80% identity corresponding to amino acid sequence beginning with amino acid 396 and ending with amino acid 439 of SEQ ID NO: 1 or fragments thereof~~ a peptide having a first motif of Pro-Xaa₍₄₎ to Xaa₍₁₀₎-Pro followed by a second motif of Phe-Xaa-Leu-His-Pro or Tyr-Xaa-Leu-His-Pro,

wherein the particle is assembled with the polypeptide molecule during recombinant co-expression to form a non-covalently associated complex.

Claim 56. (Previously presented) The complex of claim 55, wherein papillomavirus capsid L1 polypeptides are selected from the group consisting of HPV6, HPV6a, HPV11, HPV16, HPV18, HPV30, HPV31, HPV33, HPV35, HPV39, HPV42, HPV43, HPV44, HPV45, HPV51, HPV52, HPV54, HPV55, HPV56, and HPV70 papillomavirus capsid L1 polypeptides.

Claim 57. (Previously presented) The complex of claim 55, wherein papillomavirus capsid L1 polypeptides are selected from the group consisting of HPV6b, HPV11, HPV16, and HPV33 papillomavirus capsid L1 polypeptide.

Claim 58. (Previously presented) The complex of claim 55, wherein the papillomavirus capsid L1 polypeptides are HPV11.

Claim 59. (Canceled)

Claim 60. (Currently amended) The complex of claim 55, wherein the ~~second~~ polypeptide molecule is a chimeric polypeptide molecule.

Claim 61. (Previously presented) The complex of claim 55, wherein the five papillomavirus capsid L1 polypeptides or truncated papillomavirus capsid L1 polypeptides are truncated papillomavirus capsid L1 polypeptides.

Claim 62. (Currently amended) The complex of claim 61, wherein the truncated papillomavirus capsid L1 polypeptides comprise papillomavirus capsid L1 polypeptides having the truncation up to 30 amino acids removed from the carboxy terminus or removal of carboxy terminal amino acids up to an ultimate glutamine.

Claim 63. (Currently amended) The complex of claim 55, wherein the ~~second~~ polypeptide molecule ~~comprising further comprises~~ at least one immunogenic epitope ~~is derived from a viral-associated protein or a tumor antigen[.] comprising at least one immunogenic epitope.~~

Claim 64. (Currently amended) The complex of claim 55, wherein the ~~second~~ polypeptide molecule is derived from a papillomavirus capsid L2 polypeptide or portions thereof.

Claim 65. (Currently amended) The complex of claim 55, wherein the one or more papillomavirus capsid L1 interaction sequence(s) comprises ~~a fragment and the fragment~~ ~~comprises~~ at least 90% identity corresponding to amino acid sequence beginning with amino acid 406 and ending with amino acid 439 of SEQ ID NO:1.

Claim 66. (Canceled)

Claim 67. (Currently amended) The complex of claim 55, wherein at least one of the one or more papillomavirus capsid L1 interaction sequence(s) corresponds to amino acid sequence beginning with amino acid 396 and ending with amino acid 439 of SEQ ID NO:1.

Claims 68-69. (Canceled)

Claim 70. (Currently amended) The complex of claim 55, wherein the one or more papillomavirus capsid L1 interaction sequence(s) further comprises a hydrophobic region corresponding to amino acids 413 and 416 of SEQ ID NO:1.

Claim 71. (Previously presented) The complex of claim 55 wherein the papillomavirus capsid L1 polypeptides comprise a point mutation corresponding to cysteine position 424 of SEQ ID NO:1.

Claims 72-73. (Canceled)

Claim 74. (New) The complex of claim 55, wherein there are 10 to 15 amino acids between the first motif and the second motif of the one or more papillomavirus capsid L1 interaction sequence(s).

Claim 75. (New) The complex of claim 55, wherein the Xaa of the second motif is Tyr, Val, Thr or Glu.

Claim 76. (New) A complex comprising:

- a) a first polypeptide molecule comprising a papilloma L1 or fragment thereof, the first polypeptide molecule capable of interacting with the papillomavirus capsid L1 interaction sequence; and
- b) a second polypeptide molecule comprising one or more papillomavirus capsid L1 interaction sequence(s), the papillomavirus capsid L1 interaction sequence comprises a peptide of having a first motif of Pro-Xaa₍₄₎ to Xaa₍₁₀₎-Pro followed by a second motif of Phe-Xaa-Leu-His-Pro or Tyr-Xaa-Leu-His-Pro, the first polypeptide assembled with the second polypeptide during recombinant co-expression to form a non-covalently associated particle with the second polypeptide.

Claim 77. (New) The complex of claim 76, wherein there are 10 to 15 amino acids between the first motif and the second motif.

Claim 78. (New) The complex of claim 76, wherein the Xaa of the second motif is Tyr, Val, Thr or Glu.

Claim 79. (New) The complex of claim 76, wherein the second polypeptide molecule has at least 80% identity corresponding to amino acid sequence beginning with amino acid 396 and ending with amino acid 439 of SEQ ID NO: 1